## EDUCATIONAL EFFICIENCY

## BY HENRY DAVIS BUSHNELL

To minds open and progressively inclined, the general topic of improvement and advance in educational methods is received with an interest measured only by the vast importance and far-reaching influence of the subject. It is, then, before broad-minded judges and to a prepared audience that Bulletin Number Five of the Carnegie Foundation makes its case for methods and means intended to increase efficiency in higher education. The suggestions of this publication, presented with persuasiveness and worked out with infinite and painstaking detail, may briefly be summed up (without intending to belittle the vast labor of the research) as an attempted application of the most modern, advanced, and best methods of industrial activity to the problems of education, to the end that less 'moss' shall exist upon the portals of our places of higher education. In other words, the business test of accounting is to be applied for the purpose of ascertaining with some degree of certainty whether each dollar expended in the cause of learning is reaping its dollar's worth of return on the investment. Taking all things into consideration, it is believed that this is a fair statement of the purpose and scope of the publication to which we have referred.

Now, it is obvious to all alumni who are worthy of the educational advantages that they enjoyed, that the cause of learning, training, culture — whatever name it may be desirable to use — must not lag behind the general march

forward of civilization in the generic sense. On the contrary, those entrusted with the problems of teaching must, to be entitled to consideration, be in the forefront of the advance, leading the advance, and more than that, willing to be led whenever and wherever light from any source shows clearly the way of advance to be.

No graduate of our universities, if he has obtained at the knee of his Alma Mater the best she has to give, an open mind, a judgment in suspension, an abhorrence of the attitude of fixed and definitive opinion, -but will readily concede that there are serious shortcomings and wants in his own university, and, therefore, probably in all others; although when he is honest with himself, as he reviews his own personal experience and that of his intimates, he will be compelled to admit that many of the points he regrets are chargeable to his own indifference or indolence rather than to inefficient management.

But the faults of higher education in this country, which may be granted by all who know the facts, are present; and the problem is, how to correct them.

The author of Bulletin Number Five, approaching the subject from the point of view of business management, must necessarily see even at first sight much that distresses an orderly, systematic mind. He cites such instances as gardeners refraining from work about college grounds until professors' hours in class or lecture-rooms begin,

and on afternoons of intercollegiate games: he points out that some lecturerooms are never fully in use or used fully only part of the time, causing a waste measured by a 'student-perfoot-per-hour' standard; he objects to professors writing by hand what should be dictated; he observes students loitering on the way to lectures, and so on. Granted the premises, there is inexorable logic and there are true conclusions in the argument, set forth so exhaustively and ably. But in spite of broad-mindedness, or rather, let us be not afraid to say, because of it, many of the graduates of American colleges and universities, men prominent in every department of enterprise, searching for the most up-to-date methods of doing business, - 'scrapping' machinery, men, or processes the instant that their efficiency is impaired below a standard, - will pause in their analysis of the proposed invasion of academic fields, and firmly if courteously deny the truth of the premises.

To apply the rule of false analogy to the argument in behalf of the innovation, will satisfy and convince many minds of the fallacy in the reasoning. We of this complexion of thought will gladly see gardeners and janitors, bookkeepers and others, who carry on the true business machinery of the university, caused to labor under conditions of the least waste and greatest efficiency; let supplies be standardized (if that be possible in the face of such diverse activities as experimental chemistry and the study of Chaucer in the original), but never with equanimity can we grant that there exists a parallel, an analogy between the processes of turning out steel rails and those of turning out men of the widely diversified capacities of our A.B. degreeholders - scholars, thinkers, leaders of men, mere gentlemen of cultured

tastes, the vast body of alumni who perhaps are distinguished by nothing more than that they have learned their own limitations and have found out how best to apply their individual capabilities.

In this body the ablest business man himself is not attracted by the idea of impressing upon the undergraduate the thought, baldly stated, that every hour that he occupies two square feet of lecture-room space he must be expected to produce so many dollars' worth of lecture-room-professor-student-hours' worth of education in money value. 'Produce?' That is not what he is there for, and that is what makes the fallacy in the argument apparent; industrial methods of efficiency look to the production of a commodity at the least expense for the greatest profit; all is subordinated to that theory.

Not so, however, do the results of higher education evolve. As the New York Evening Post suggested, the personality of instructors cannot be standardized, and it is largely that which leads fathers to send their sons to this or that college - not in the hope of acquiring for each student-hour of instruction a tangible equal standardized block of learning. Human hands may be compelled to dig so many feet of ditch per hour, but human minds, to say the least, may be affected today by some loss of sleep last night, spent in the pursuit of some innocent but valuable aspect of life, better learned in the epitome of college days than in the shelved volume of later vears.

More pernicious even is this invasion of material, monetary standards likely to be in the work of professor or instructor. Are the free play of his individuality, his painstaking research work,—often necessarily barren of results but no less valuable to learning,

—his maturing judgment and opinion, to be cramped and shriveled by the thought of profit-and-loss on the page of the ledger which bears his record?

It ever seems an ungracious task to criticize and tear down with no offer of a substitute for that which is attacked, yet that is the situation in which the present writer finds himself, and he must perforce cry peccavi. The subject of economical administration is, and has been too long, the burden of able and experienced men, for a layman to attempt suggestions of any value. But if the above outlined argument is valid, then the proposed adaptation of industrial methods, the plan of systematization, is wholly inapplicable, and we are left where we were at the beginning, or nearly so, although there are many excellent ideas brought to light in the pages of the Re-

In the last analysis, the efficiency of an institution of education depends upon the ability of its teachers, and that this is not and never can be measured by industrial or monetary values, witness the salaries paid, — as a general rule smaller in the older and better-known universities, which without prejudice may be said to be at least equally as efficient as the younger ones which pay higher salaries. Heaven and the professors know that not in this regard may charges of extravagance or

waste be preferred!

As regards excess or non-use of floor-space in lecture-halls or laboratories, it is maintained that upon a true theory of education more loss or waste will occur where there is over-crowding and bad ventilation, distraction of attention and noise by reason thereof, than where each student has more than enough room for himself, whether in laboratory, library, or lecture-hall. In this view of the matter it would appear to be a short-sighted

policy of financing a college plant to attempt to make supply exactly equal to demand, for the demand is variable, both as to courses, and by years; and it would be impossible precisely to expand and contract floor-space as needs might grow or diminish. Let there be an excess or even a non-use; so much the better for comfort and health, which are in some respects alone things of value.

Furthermore, observing that the cost per student-hour is directly affected by the presence or absence of the individual at a given time and place, and waiving argument upon the point that "cuts" are sometimes justified by circumstances, or that the liberty of judgment in that regard may on the other hand be abused, it is certainly true that to urge or insist that a student shall be in his place at lectures or recitations for the reason that if he is not a money loss, a lowering of return on investment, will result from his absence, is to set before him a motive that he can never respect, one subversive of all ideals of true scholarship, and humiliating to the instructor. What progressive educators are trying to attain is the growth from within of a greater respect for high scholarship, and it is maintained that the application of mill methods upon the undergraduate body will react in a manner that will push back the attempted attainment as little else could.

Looking at the subject broadly, it would appear that only general principles of economy could be invoked to correct such financial evils as may exist in our colleges and universities. There is no real unit upon which to standardize, nor is it desirable that all colleges should even be similar in their organization and service. The man who goes to a University of Wisconsin does so with a different object from that of the man who decides for a Dartmouth. Is there no room for both?

These questions present themselves to the majority of lovers of the traditional benefits of higher education, and can be answered for them in only one way. At the risk of being set down as reactionaries, as non-progressives, this large conservative element finds this reply: Better a thousand times that waste should exist, than that it should be checked by methods derogatory to the creation of ideals, the setting high of spiritual standards of thought and conduct, appreciation and understanding, among the youth of the land. These attributes are among the best products of our learning-factories, and these come slowly, uncertainly: now educed by contact with the personality of this professor, now chastened by association with that fellow classman, again originated by the new-lighted flame of inspiration from research in chemistry or history.

Granted that we should insist upon more diligence in study by the student body, that high scholarship should receive somewhat the same amount of acclaim that athletics does, we *cannot* grant that these results will flow from setting the dollar-mark over against things of the intellect, or of the spirit. The rough hand of commercialism too soon strips off the illusions of life when our lad leaves academic shades, and forthwith he becomes a disregarded, dispensable factor in the world's work. Therefore let every watch be set to keep the influence of commercialism out of the formative years, as well as out of the sight of those whose unselfish service it is to educate — to draw forth from the hearts and minds of their pupils a spark of the divine fire.

May the day never come when American students punch a time-clock, or instructors produce by the hour for their daily wage. The money donated by benefactors, so spent, would be money better not spent, for it would defeat its own purpose of spreading liberalizing education. Let us have more, rather than less, of the English theory of education for its own sake and the general enrichment of life. Its value should be measured, not by the money spent in obtaining it, but by the life and works of its possessor.